



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,975	12/09/2003	Tsuyoshi Yamashita	24-011-TB	2217
23400	7590	07/29/2005		
POSZ LAW GROUP, PLC 12040 SOUTH LAKES DRIVE SUITE 101 RESTON, VA 20191			EXAMINER HOLLINGTON, JERMELE M	
			ART UNIT	PAPER NUMBER
			2829	

DATE MAILED: 07/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,975

Applicant(s)

YAMASHITA, TSUYOSHI

Examiner

Jermele M. Hollington

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8 and 10 is/are rejected.
- 7) ☒ Claim(s) 4-7 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 3 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamashita et al (6445203).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Regarding claim 3, Yamashita et al disclose [see Figs. 1-4] a temperature control method for controlling the temperature of an electronic component (IC 2) to be tested during the testing of the electronic component (2) in an electronic component handling apparatus (test chamber 102), comprising: cooling [via fan 92] of the electronic component (2) to be tested, performed by cooling a heat absorbing and radiating body (temperature sensor 114) to which the heat of the electronic component (2) is transferred through a pusher main body (rod 31), the pusher main body (31) being in contact with the electronic component (2); and heating of the electronic

Art Unit: 2829

component (2) to be tested, performed by a heater (heat exchanger 94) and preventing heat conduction from the heater (94) to the pusher main body (31) and the heat absorbing and radiating body (114) by a thermal insulating material (radius groove 112) provided between the pusher main body (31) and the heater (94).

Regarding claim 10, Yamashita et al disclose the step of conducting heat from the pusher main body (31) to the heat absorbing and radiating body (114), wherein the pusher main body (31) is made of thermally conductive material (112).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al (6445203) in view of Tustaniwskyj et al (5821505).

Regarding claim 1, Yamashita et al disclose [see Figs. 1-4] a heater-equipped pusher (pusher 30) for pushing a terminal of an electronic component (IC chip 2) to be tested in an electronic component handling apparatus into a contact portion of a test head (test head 5), comprising: a pusher main body (rod 31) which is capable of direct contact with the electronic component (2) to be tested; a heat absorbing and radiating body (temperature sensor 114) provided on said pusher main body (31); a heater (heat exchanger 94); and a thermal insulating material (radius groove 112). However, they do not disclose a heater as claimed. Tustaniwskyj et

Art Unit: 2829

al disclose [see Fig. 12] a heater-equipped pusher (heat sink 14) comprising: pusher main body (sink base 14a), a heat absorbing and radiating body (temperature sensor 14f) on said pusher main body (14a), a heater (heater 13) provided on said pusher main body (14a) to enable direct or indirect contact with a electronic component (electronic device 11) to be tested without intervention of said pusher main body (14a); and a thermal insulating material (thermally conductive layer 102 shown in Fig. 18) provided between the main body (14a) and the heater (13). Further, Tustaniwskyj et al teach that the addition of a heater on a main body is advantageous because it maintains the temperature of an electronic device near a constant set point temperature while the device is being tested. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Yamashita et al by adding a heater on the main body as taught by Tustaniwskyj et al in order to maintain the temperature of an electronic device near a constant set point temperature while the device is being tested.

Regarding claim 2, Yamashita et al disclose [see Fig. 1] an electronic component handling apparatus (chamber 102) which, in order to test an electronic component (IC chip 2), is capable of pushing a terminal of an electronic component (2) to be tested into a contact portion of a test head (test head 5), comprising the heater-equipped pusher (pusher 30) according to claim 1.

Regarding claim 8, Yamashita et al disclose the pusher main body (31) is made of a thermally conductive material (radius groove 112).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Saito et al (2002/0109518), Malinoski et al (6498899), Yamashita et al (2004/0124846), and Jones et al (6788084) disclose a method and apparatus for testing a device under test inside a temperature chamber.

6. Claims 4-7 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 4 and 9, the primary reason for the allowance of the claim is due to a heater is disposed on a lower portion of the pusher main body so as to be exposed on same plane as a lower surface of the pusher main body.

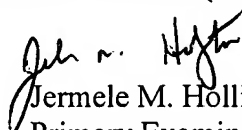
Regarding claim 5, the primary reason for the allowance of the claim is due to a heat absorbing and radiating body is a heat sink. Since claims 6-7 depend from claim 5, they all have allowable subject matter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (571) 272-1960. The examiner can normally be reached on M-F (9:00-4:30 EST) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (517) 272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2829

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jermele M. Hollington
Primary Examiner
Art Unit 2829

JMH
July 21, 2005